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NEW FLORIDA FUNGI.

BY J. B. ELLIS AND DR. GEO. MARTIN.

The species here described were mostly collected by Dr. Martin at Green Cove Springs, Florida, in the winter of 1885.

PATELLARIA CYANEA, E. & M.—On living leaves of *Quercus* (*laurifolia?*) February. Gregarious or scattered, hypophyllous. Excipulum patelliform, sessile, orbicular, 275 μ diameter, convex and obscurely marginate, becoming concave, nearly indigo-blue and surrounded by a scanty mycelium which stains the leaf blue. Asci oblong-cylindrical, contracted at the base, 8-spored, 27—30 x 6 μ, without paraphyses. Sporidia biseriate, obovate, 1-septate, hyaline, 7—9 x 3 μ.

Has the general aspect of *Asterina subcyanea*, E. & M., also much resembles *Patellaria nigro-cyanea*, Phill. & Hark., outwardly, but that species has asci 75 x 15 μ and sporidia 14—16 x 3—4 μ.

ASCOMYCETELLA AURANTIACA, E. & M.—On leaves of *Quercus laurifolia*, March. Dull orange-yellow, hypophyllous, flat, scattered, 380—400 μ diameter. Asci obovate or pyriform, contracted below into a short stipe, 25—38 x 12—15 μ. Sporidia crowded, obovate, 1-septate, constricted at the septum, granular at first, becoming clear and hyaline, 12—15 x 4—6 μ. Paraphyses none. Conidia abundant, forming small, loose, white tufts scattered over the lower surface of the leaf and consisting of closely packed bundles of hyphæ 100—150 x 12—15 μ, bearing lateral and terminal, hyaline, oblong-elliptical, 5—7 x 2—3 μ conidia. The bundles of hyphæ are hyaline and cylindrical, and separate at intervals of 12—20 μ into sections squarely truncate at each end. Apparently the growth is proliferous; the little bundles of hyphæ, after reaching the height indicated and bearing at their apices a crop of conidia, continue their united growth for 12—20 μ further, where they bear another crop of conidia; and this process is repeated several times, a joint or articula-

tion being formed at each resting point which is also marked by a ring of conidia surrounding the bundle of hyphæ at these points. This differs from *A. sulfurea*, Winter, of which we have a specimen, in its smaller septate sporidia and the presence of conidia. The sporidia of *A. aurantiaca* seem to be mature. and we do not think they ever become 3-septate as in *A. sulfurea*.

In Grevillea, vol. 4, p. 156, we find the following brief diagnosis of *Capnodium pelliculosum*, B. & Rav.: "Threads of the mycelium erect, trifid at the apex, after the fashion of a *Triposporium*, shorter than the oblong, constricted perithecia." Specimens of this production have been distributed in De Thumen's Mycotheca, 2059, and in Rav. F. Am., no. 79, on living leaves of *Prunus Chicasa*, from South Carolina, but in our copies of both these exsiccati the specimens are without perithecia and show no trace of "threads trifid at the apex." Specimens, however, collected by Dr. Martin, at Green Cove Springs, Florida, on leaves of *Magnolia glauca*, in February and March, 1883, show both the pycnidial and ascigerous perithecia and the *Triposporium*-like tips of the threads of the mycelium. As this latter character is a striking one, and as our specimens on *Magnolia* agree well enough in other respects with the diagnosis above quoted and with the specimens in the exsiccati referred to, we consider it tolerably certain that they represent the mature state of the species in question, and have written out a detailed description as follows:

CAPNODIUM PELLICULOSUM, B. & Rav.—On leaves of *Magnolia glauca*, February. Mycelium epiphyllous, forming a thin, sooty-colored layer on the surface of the leaf and consisting of closely septate, brown, subrectangularly branched and interwoven threads, 5—8 μ thick, with each cell or joint nucleate and bearing when well developed, stellately 3—4-parted conidia, much like those of *Triposporium*, nearly hyaline at first, becoming brown, each arm 4—5 septate and nucleate, 7—9 μ thick at the base and 50—75 μ long, tapering to an obtuse point at the apex. Pycnidial perithecia growing like thick branches from the sides of the prostrate threads, membranaceous, of rather coarse cellular structure, oblong or flask-shaped, 75—200 x 30—50 μ, apex subobtuse and subfimbriate, discharging countless, minute, hyaline, oblong spores, 3—4 x 1 μ. Sometimes these perithecia are quite globose and formed by the enlargement of one of the component cells of a thread or hypha. There are also produced from the mycelium cylindrical, brown, multiseptate conidia, 70—80 x 6—7 μ, like the conidia of *Helminthosporium*. Ascigerous perithecia seated on the mycelium, depressed-globose, membranaceous, 100—150 μ diameter, with brown, septate appendages like those of an *Erysiphe* 15—25 in number, 75—100 μ long. Asci at first oblong, becoming ellipsoidal and about 40—25 μ. Sporidia crowded, broad-fusiform, hyaline, 1-septate at first, becoming 3-septate at maturity, and 15—22 x 4—7 μ.

ASTERINA STOMATOPHORA, E. & M.—On living leaves of *Quercus laurifolia*, February and March. Perithecia lenticular, scattered, small,

170—185 μ diameter, with a thin, reticulated margin and indistinctly perforated in the center, texture cellular. Asci 30—35 x 6—8 μ, oblong and rather broader below and abruptly contracted into a short, stipitate base. Paraphyses none. Sporidia biseriate, oblong, 1-septate, rather narrower and more acute at the lower end, 7—12 x 2½—3 μ, hyaline. When a perithecium is removed from the leaf, a piece of the epidermis often adheres to its lower surface so that under the microscope the stomata are visible through the thin edge of the perithecium, appearing as if they actually formed a part of it. It is to be noted that in this and most of the other species with flattened perithecia, the wall of the perithecium is nearly obsolete below, so that the perithecium is in fact hardly more than a shield-like disk covering the asci.

SPHÆRELLA INCISA, E. & M.—On dead petioles of *Sabal serrulata*. Perithecia membranaceous, gregarious, globose or depressed-globose, ¼ mm., covered by the blackened epidermis. Asci lanceolate, 100—120 x 8—10 μ, without paraphyses. Sporidia fusiform, attenuated to a bristle-like point at each end, endochrome distinctly divided in the middle, pale yellowish; length, including the bristle-pointed ends, 40—50 μ, width 3—4 μ. The walls of the perithecia are closely adnate to the matrix, and with difficulty separable from it.

OPHIOBOLUS VERSISPORUS, E. & M.—On dead petioles of *Sabal serrulata*. Perithecia scattered or gregarious, covered by the cuticle, lenticular, ⅛—⅓ mm., covered by the blackened epidermis which is whitened just around the short, obtuse, barely erumpent ostiolum. Asci 70—80 x 8—9 μ. Paraphyses? Sporidia filiform, curved, multinucleate at first but at length of a uniform pale yellow color without nuclei or septa, 60—70 x 2—2½ μ.

Melanconium Sabal, Cke. is usually associated with this.

DIDYMOSPHÆRIA SERRULATA, E. & M.—On bleached spots on dead petioles of *Sabal serrulata*. Perithecia as in the preceding species. Asci 100—112 x 10—12 μ, cylindrical with abundant linear paraphyses. Sporidia 1-seriate, hyaline at first and 3-4 nucleate, soon becoming dark brown and 1-septate, 18—20 x 5—6 μ, surrounded with a hyaline envelope at first. The sporidia are much like those of *Anthostomella leucobasis*, E. & M., only longer and 1-septate, and the perithecia are larger and more prominent.

SPHÆRIA (ANTHOSTOMELLA) LEUCOBASIS, E. & M., and SPHÆRIA SABALENSIOIDES, E. & M., in Am. Nat., Oct. 1882.—The general appearance of these two species is much the same, but the latter is scattered *between* the dark blotches on which the former occurs, and the substance of the matrix is *not* whitened beneath. The sporidia also are uniformly narrower, 4—5 μ, and have a slight apiculus at the lower end (sometimes at both ends) separated from the body of the sporidium by a slight division of the endochrome but finally absorbed; they are also subhyaline with a yellowish tint in all the specimens examined, though it is not

improbable that they may finally become brown. This species occurs on some of the specimens with no. 1199, N. A. F.

It is not improbable that *Sphæria sabalicola*, E. & M., l. c., is the same as the *S. sabaligera*, B. & C., though the sporidia are only about half the length given for that species.

HETEROSPORIUM ALLII, E. & M.—On withered leaves of *Allium vineale*, Newfield, N. J., Aug. 1883. Hyphæ erect, subcontinuous, nodulose, olive-brown, about 50 x 9 μ. Conidia oblong, fuscous, minutely echinulate, 1—3-septate, 20—33 x 9 μ. Differs from *H. Ornithogali* in its olivaceous color and smaller conidia.

SEPTORIA PYROLÆ, E. & M.—On living leaves of *Pyrola secunda*, Red Rock, Lake Superior, June, Prof. J. Macoun, no. 20. Appears at first in the form of little yellowish-white pustules scattered over the lower surface of the leaf but visible also above. Soon the little nerve-bounded areas of the leaf, in which these pustules appear, turn brown bordered by the limiting nervelets now turned black, and in place of the yellowish-white pustules appear little black perithecia, opening below and filled with filiform, 25—35 x ¾ μ spores, obtuse at each end and only slightly curved.

SEPTORIA CONSIMILIS, E. & M.—On cultivated lettuce, Geneva, N. Y., July (Arthur), Newfield, N. J. On brown, dead, rather indefinitely limited spots, ½—1 cm. in diameter. Perithecia, brown, subglobose, innate, amphigenous, 90—100 μ, scattered over the spots and visible on both sides of the leaf. Spores filiform, multinucleate, slightly curved, ends mostly obtuse, 30—45 x 2—2½ μ, hyaline. Differs from *S. Lactucæ*, Pass, in growing chiefly on spots, perithecia also a little larger and spores a little longer but not distinguishable by its spores alone.

PHYLLOSTICTA GORDONIÆ, E. & M.—On living leaves of *G. lasianthus*, March. Spots dark brown, dry, occupying the ends and sides of the leaves. Perithecia brown-black, subglobose, innate, slightly erumpent, amphigenous, 120—140 μ. Spores hyaline, oblong, nucleate, 12 x 3 μ.

PHYLLOSTICTA PERSEÆ, E. & M.—On living leaves of *Persea Carolinensis*, March. Spots brownish-gray, covering the ends and sides of the leaves. Perithecia brown-black, lenticular, innate-erumpent, epiphyllous, 150—300 μ long, 60—80 μ broad. Spores oblong, hyaline, nucleate, 3—8 x 1—3 μ. This and the preceding species with *P. terminalis* E. & M., and *P. Myricæ*, Cke., were collected in the same locality, and, from the similarity in their mode of growth and the not very striking difference in their other characters, they might be considered as varieties of the same thing; this, however, is a question that can not be definitely determined without knowing the ascigerous forms to which they all probably belong.

PESTALOZZIA PEREGRINA, E. & M.—On dead leaves of *Prinus Austriaca*, still hanging on branches cut off last year, Newfield, N. J., May 1885. Acervuli hysteriform, covered at first, then partially erumpent.

Spores oblong-elliptical or obovate, 4-septate with a short, narrower, subconical, hyaline cell at each end, intermediate cells brown. Crest of 3 hyaline, spreading bristles about 7—10 μ long. Basidia about as long as the spore, slender. Colored part of the spore 12—16 x 6—7 μ. Differs from *P. funera*, Desm, in its constantly smaller spores.

ASTERINA DISCOIDEA, E. & M., in Am. Nat. This occurs also on leaves of *Olea Americana*, not differing specially from the form described on leaves of *Quercus laurifolia*. It may be that this is the *A. oleina*, Cke., Grev. XI, p. 38. The description there given is not inconsistent with this supposition. In that case, *A. discoidea*, E. & M., is a synonym of *A oleina*, Cke. Unfortunately, the specimen of this latter species in Rav. F. Am., no. 757, in our copy, does not show even a perithecium.

MICROSPHÆRA DENSISSIMA, Schw.—What appears to be this species was found on leaves of *Quercus laurifolia*, at Green Cove Springs, in January and February, 1885. Mycelium thick, gray, persistent, confined to definite spots on the lower surface of the leaf, 8—10 mm. in diameter. Perithecia black, globose, then depressed, 120 μ. Appendages stout, continuous and subhyaline, twice dichotomous, ultimate divisions curved, 96—120 x 7 μ. Asci 6. Sporidia 6—8, oval, granular and nucleate, 21—25 x 12 μ. The branched tips of the appendages are often of a pyramidal shape, the main axis running through and bearing a second set of branches shorter than the first.

NEW NORTH AMERICAN FUNGI.

BY DR. G. WINTER, LEIPZIG, GERMANY.

SPHÆRELLA EARLIANA, Winter.—Perithecia amphigena, densissime stipata, greges parvos, angulato-rotundatos, ca. 1—2 mm. latos, nigros formantia, minutissima, globosa, poro simplici pertusa, atra, 60—70 μ diameter. Asci fasciculati, e basi subventricosa sursum parum attenuati, brevissime stipitati, 8—spori, 26—30 μ longi, 7 μ crassi. Sporæ inordinatæ, clavatæ, medio uniseptatæ, non constrictæ, hyalinæ, 8 μ longæ, 2 μ crassæ. Paraphyses desunt.

On cultivated strawberries, Anna, Ills., May 2d, 1882, Leg. F. S. Earle. Differs from *Sphærella Fragariæ* (Tul.) especially in its small asci and sporidia.

FUSICLADIUM EFFUSUM, Winter.—Cæspites hypophylli, plerumque minuti, rotundati, rarius effusi, confluentes, sine macula, fumosi. Hyphæ erectæ, simplices vel parum ramosæ, septatæ guttulatæque, valde torulosæ, fuscæ, apicem versus dilutiores, 100—140 longæ x 4 μ crassæ. Sporæ oblongo-fusoideæ, fere rhomboideæ, continuæ vel uniseptatæ, dilutissime fuscescentes, utrinque subtruncatæ, 17—24 μ longæ, 5½—7 μ crassæ. On leaves of *Carya alba*, Cobden, Ills., October 1st, 1882. Leg. F. S. Earle.

Darluca interseminata, Winter.—Perithecia gregaria s. dense sparsa, superficialia, punctiformia, globosa, demum collapse, poro pertusa, membranacea, fusca, 80—130 μ diameter. Sporæ oblngæ s. oblongo-cylindraceæ, utrinque rotundatæ, hyalinæ, uni-(rarissime bi-) septatæ, ad septum vix vel perparum constrictæ, 12—14 μ longæ, 3 μ crassæ. On leaves of *Stellaria* with *Peronospora Alsinearum*, Casp.

Doassansia decipiens, Winter.—Acervuli epiphylli, greges minutos, rotundatos irregularesve, interdum confluentes, pallide fusco-luteos, in macula indeterminata, luteola insidentes, 1—5 mm. diameter, metientes, formantes, punctiformes, rotundati seu elliptici, plerumque dense stipati, non raro confluentes, fusci, immersi, 100—200 μ lati, e sporis numerosissimis, densissime conglobatis, a tegumento tenuissimo, pseudoparenchymatico, e cellulis minutissimis, fuscis contexto, dense applicato, undique circumdati. Sporæ rotundato-polygoniæ, isodiametricæ (sit venia verbo!) vel subellipticæ, sæpe irregulares, pallide fuscidulæ, læves, 10—16 μ diam. in planta adhuc viventi germinantes. Sporidia filiformia, tenuissima, sæpe flexuosa, usque 70 μ longæ, vix 1 μ crassæ. On leaves of *Limnanthemum lacunosum*. Leg. E. A. Rau., Green Pond, Morri Co., N. J., Aug. 1883. This is a very interesting but doubtful species.

SUPPLEMENTARY NOTES ON RAMULARIA.

Whether the mycelium in *all* the species spreads through the intercellular spaces of the leaf, cannot perhaps be positively stated, but this is very plainly the case with some. In *R. Tulasnei*, Sacc., the creeping threads of mycelium among the inner cells of the leaf are very noticeable. The fertile hyphæ also often burst out from little pustules, like the young pustules of some uredo, and sometimes apparently they are quite superficial.

Ramularia macrospora, Fres. var. *Senecionis*, Sacc.—On leaves of *Aster Novæ Angliæ*, Wis. (Trelease.) To the naked eye resembling the conidia of *Entyloma Compositarum*, Farl. Conidia colorless, 1—4-celled, usually 2-celled, oblong ovoid, slightly truncate at the pointed extremeties, sometimes narrowed gradually to the septum, 20—40 x 5—6 μ. This species which should have been included with the others in the June No. of the Journal was overlooked. The description is copied from the Prelim. List of the Parasitic Fungi, Wis., p. 13.

Ramularia crypta, Ck. Grev. XII, p. 27.—The description of this species which was overlooked (see p. 82 of this Journ.) is given below:

"Hypophyllous, covered by the tomentum of the leaf. Hyphæ thick (crassæ), simple, short. Conidia cylindrical, obtuse at each end, straight or slightly curved, hyaline, 25—30 x 6 μ."

NEW GENERA OF NORTH AMERICAN FUNGI.

The following new genera of North American Fungi have been published by Saccardo.

HYSTEROMYXA, Sacc. & Ell., Mich., II, p. 574.—Perithecia membranaceous, superficial, depressed, oblong or subangular, bright colored, dehiscence rimose or substellate, texture irregularly cellular, thin, covered with a homogeneous, transparent cuticle. Spores abundant, globulose bright colored. Basidia not seen. A genus of doubtful affinity; placed by Saccardo in Syll. III, p. 622, among the subcupulate *Sphæropsideæ*.

H. EFFUGIENS, S. & E.—Perithecia minute, flattened, superficial, dull red, 1-6 mm. in diameter. Spores globose, smooth, 8—10 μ, 3—4-nucleate, subhyaline with a rose-colored tint. Found at Newfield, N. J., on dead foliage of *Cupressus thyoides*, still hanging on the limbs of a tree cut the previous year. Specimens have been distributed in the North Am. Fungi, no. 1221.

PESTALOZZIELLA, Sacc. & Ell., Mich., II, p. 575.—Acervuli subcuticular, without any distinct perithecium. Spores oblong-elliptical, continuous, subhyaline with hyaline bristles at the apex. Differs from *Pestalozzia* in its continuous, nearly hyaline spores.

P. SUBSESSILIS, S. & E. (N. A. F. 1223.)—Spots minute, nearly round, amphigenous, faded with a dark margin. Acervuli punctiform, covered by the epidermis, pallid. Spores oblong-elliptical, obtuse at each end, 20—22 x 6½—7 μ, continuous, 2—3 nucleate, subhyaline with an apical, bristle-like appendage dividing into 4—5 branches from near the base and 20—25 μ long by 1 μ thick. The spores appear to be borne on very short, bristle-like basidia. Common on living leaves of *Geranium Carolinianum* at Newfield, N. J., spring and summer.

EVERHARTIA, Sacc. & Ell., Mich. II, p. 580.—Sporodochia verruciform, dark amber color, superficial. Conidia involved in a gelatinous or mucose substance, densely compacted, cylindrical, closely convolute, multiseptate, hyaline. Basidia obsolete. The genus is dedicated to Benjamin M. Everhart, of West Chester, Pa.

E. HYMENULOIDES, S. & E. (N. A. F. 969.)—Sporodochia of a dirty amber color, scattered, hemispherical or subelongated, 1-6—1-5 mm. in diameter, compact, superficial. Conidia cylindrical, closely coiled so as to form a flattened, subelliptical mass (18—20 x 16 μ), closely septate or jointed, the segments subcubical, 2—2½ μ in diameter, hyaline but immersed in a yellowish mucose substance. Found on dead leaves of *Sorghum nutans*, at Newfield, N. J., autumn.

An examination at this time (June, 1885) of specimens collected in 1880, shows the coiled spores or conidia to have assumed the appearance of globose or ovate sacks or asci about 15 μ in diameter, containing numerous small (2½—3 x 1½ μ) sporules arranged more or less distinctly in

a spiral manner, and being, in fact, the different sections or joints into which the spirally coiled, cylindrical conidia have separated. Apparently these joints or segments were at first contained in a tubular membrane which has now dissolved, being more evanescent than the membrane enveloping the entire coil, which still persists and appears even more distinct than at first, in the form of a subglobose sack or ascus. In the examination of the fresh specimens the spirally coiled conidia seemed to be attached laterally to upright, simple threads or hyphæ, but we would not be positive of this. The genus is evidently allied to *Cylindrocolla*.

SPHÆROCREAS, Sacc. & Ell., Mich, II, p. 502.—Sporodochia superficial, globose or hemispherical, compact. Hyphæ or sporophoresclosely fasciculate, filiform, very long, continuous, simple. Conidia large, globose-ellipsoid, continuous, hyaline, adhering to the sporophores by a long, cuspidate tail or pedicel. A very distinct genus but of doubtful affinity approaching *Aegerita* on one side and *Nœmatelia* on the other.

S. PUBESCENS, S. & E.—Sporodochia subglobose, yellowish, (white when fresh), .5—1 mm. in diameter, clothed with acicular, continuous, scattered hairs about 60 x 2 μ. Hyphæ very long, densely radiate, fasciculate. Conidia obovate, 25—30 x 20—22 μ, hyaline, with a single nucleus and covered with a thick (2 μ) hyaline membrane and gradually narrowed below into a hyaline cusp or pedicel by which it is attached to the hyphæ or sporophores. Apparently very rare. Found only in a single locality under the roots of an old cedar stump partly overturned, on decaying fragments of wood and wet leaves appearing like a small, white Peziza on a speck of white mold. Under this particular stump it has been found sparingly for several years, but nowhere else.

GRANULARIA, Willd. emend.—Sporodochia (peridia?) globose, bright-colored, rather soft, composed of hyphæ and hyaline, filiform sporophores densely, radiately compacted. Spores (conidia?) ovoid, continuous, hyaline, terminal. A genus allied on one side to the *Gasteromycetes*, and on the other to the *Hyphomycetes*, more closely to the latter.

G. EUROTIOIDES, S. & E.—Sporodochia subglobose, adnate-superficial, $\frac{1}{2}$—$\frac{3}{4}$ mm. in diameter, pale-yellowish, smooth, subcarnose. Hyphæ densely compacted, filiform, variously subramose, continuous, hyaline, 5 μ thick. Conidia ovoid, hyaline, 3$\frac{1}{2}$—4 x 2$\frac{1}{2}$ μ, acrogenous. On the substance of a broken specimen of *Pachyma cocos*, Schw., lying on the ground, Newfield, N. J., autumn, 1880.

HAINESIA, Ell. & Sacc., Syll. III. p. 698.—Acervuli subcuticular but soon erumpent, pulvinate, minute, phyllogenous, bright-colored, mostly yellowish-red, subtremelloid. Conidia oblong or suballantoid, continuous, hyaline, terminal and lateral, on filiform basidia which are often fasciculately branched.

Dedicated to the late Wm. T. Haines, Esq., of West Chester, Pa., distinguished alike for his legal attainments and his love of Natural Science.

H. RHOINA, Ell. & Sacc.—*Gloeosporium (?) rhoinum*, Sacc. Fungi Ital., tab. 1036. Spots hypophyllous, subcircular, fading out with a darker margin. Acervuli innate-emergent, pulvinate, nearly amber color. Conidia suballantoid, somewhat curved, 10—12 x 3 μ. Basidia copiously once or twice branched, 56—60 μ long, branches sometimes verticillate, bacillary, hyaline or yellowish in the mass. In the lower surface of the leaves of *Rhus copallina*, Newfield, N. J., August and September, 1883.

ELLISIELLA, Sacc., n. g., Mich. II, p. 26.—Hyphæ steriles erectæ, simplices, fuscæ. Conidia fousoid, with a long, curved beak above.

E. CAUDATA, Sacc., Mich. II, p. 147.—Tufts erumpent, oblong or sublinear, black, minute, ¼—½ mm. long, ⅛ mm. wide. Sterile hyphæ erect, cuspidate, rather rigid, continuous, or often distinctly septate, 100—180 x 7 μ, dark-fuliginous, subbulbose at base. Basidia at the base of the hyphæ, subpyriform, subobtuse at the apex, 2—3-spored, 15—20 x 6 μ, very pale olivaceous. Conidia fusoid, slightly curved, 28 x 5—6 μ, hyaline or yellowish, nucleate, attenuated below into a slender, curved base or pedicel, 25—30 x 1 μ.

We agree with the opinion expressed by Prof. Peck, in the 35th Rep. N. Y. State Mus., p. 139, that this genus is not sufficiently distinct from *Colletotrichum*.

NEW LITERATURE.

BY W. A. KELLERMAN.

SACCARDO & BERLESE.—"Miscellanea Mycologica,"

[Continued from page 95.]

SCORIOMYCES, Ell. & Sacc., nov. gen.

Sporodochium amorphous, somewhat waxy, bright colored, arising from the apices of rhizamorphoid fibres, forming a dense net in each subhexagonal area of which are produced the subglobose spores. No hyphæ or basidia seen. An anomalous genus of doubtful affinity.

SCORIOMYCES Cragini, Ell. & Sacc.

Fibres rhizamorphoid, amber-colored, bearing at their extremities orange colored masses of irregular shape, subcontinuous or interrupted and cavernous, bearing some resemblance to a mass of broken down honey comb or "bee bread," the amorphous masses attached to each other in a subreticulate manner, and bearing the subglobose or subangular, orange-yellow, grumous spores, 16—20 μ in diameter.

On rotten wood of *Rhus venenata*, under the bark, and in the earth and among decaying roots around old stumps, Newfield, N. J. Sent also from Kansas by Prof. F. W. Cragin (no. 148.) Probably not autonomous

but merely an abnormal or undeveloped state of some higher fungus. Compare *Coccospora*, Wallr.

GLŒOSPORIUM SEPTORIOIDES, Sacc. (*Marsonia quercina*, Winter. Hedw. 1884, p. 171.)

Spots determinate, round or irregular, 2—4 mm., occasionally confluent, yellowish brown, with a dark margin. Acervuli generally solitary in the center of the spots, sometimes 2—4 on a spot, covered, slightly elevated, finally collapsing. Spores fusoid, more or less curved, acute at each end, hyaline, nucleolate, endochrome at length indistinctly parted in the middle, 15—24 x ½—2 μ.

On leaves of *Quercus imbricaria*, Missouri (Demetrio.) On leaves of *Q. coccinea*, Newfield, N. J. This should be placed in *Marsonia*, if that genus is to be retained as distinct from *Glœosporium*, for the mature spores have the endochrome more or less distinctly divided in the middle, often as distinctly so as in *M. Martini*, S. & E., from which this differs in its longer and narrower spores. The appearance of the collapsed acervuli and of the spots is almost exactly the same as that of *Cryptosporium epiphyllum*, C. & E., which is also a closely allied production.

BOTRYTIS PATULA, Sacc. & Berlese.

Tufts minute, whitish becoming yellowish, cottony, suborbicular, fertile hyphæ ascending, continuous, filiform, subhyaline, sending out branches and branchlets nearly at a right angle and forming an imperfect panicle. Conidia large, globose-ellipsoid, 30 μ, hyaline or yellowish.

On dead branches of *Rubus strigosus*, Newfield, N. J.

BOTRYTIS CINERELLA, Sacc. & Winter.

Tufts pulvinulate, suborbicular, 1½ mm. diameter or confluent-effused, velutinous, cinereous. Hyphæ fasciculate, ascending, septulate, pale brown below, 2—3 times alternately or oppositely branched, branches acute at the tips. Conidia globose, minute, 4—5 μ, subhyaline, terminal.

On bark of *Carya alba*, Missouri, C. H. Demetrio.

CERCOSPORA PULVINULATA, Sacc. & Winter.

Spots amphigenous, suborbicular, rufoferrugineous. Tufts hypophyllous, punctiform arising from a hemispheric, dark-olive cellular base. Hyphæ short, continuous, subdenticulate, simple, pale olive. Conidia bacillary, subobtuse, obsoletely 3-septate, 40—50 x 3½ μ, pale olive.

On fading leaves of *Morus rubra*, Missouri (Demetrio). The specific name is badly chosen, differing so little from *C. pulvinula*, C. & E.

The following species was overlooked in the Enumeration of Cercosporæ.

CERCOSPORA GLOMERATA, Hark. Bull. Cal. Acad., Feb. 1885, p. 164.

Hyphæ short, springing from a tubercular, stroma-like base. Conidia brown, slightly attenuated upwards, 3—5-septate, 60—70 x 10—12 μ.

On living leaves of *Garrya elliptica*, Tamalpais, Cal., March, 1884 (Harkness.) The parts of the leaf occupied by the fungus soon assume a dry, dead look.

"MUSHROOMS OF AMERICA, Edible and Poisonous," edited by Julius A. Palmer, Jr., published by L. Prang & Co., Boston.

This publication consists of a portfolio of twelve colored lithograph plates, and four printed pages of general directions. "These charts are prepared for popular use, rather than for students of botanical science; all technical terms are, therefore, avoided." Definitions are given of such terms as pileus, gills, veil, ring, volva, etc.; also directions for gathering mushrooms, and characters noted by which one may recognize unmistakably the several poisonous species. Descriptions are given of all the figured species, and directions for cooking the edible ones. It is a handsome work and of general interest. The species figured are as follows: Plate I, Agaricus campestris et arvensis; plate II, Coprinus comatus; plate III, Marasmius oreades; plate IV, Agaricus cretaceus; plate V, Agaricus proceus; plate VI, Russula heterophylla, R. virescens, R. lepida, and R. alutacea; plate VII, Boletus bovinus, B. edulus, B. scaber, B. subtomentosus, B. chrysenteron, and B. strobilaceus; plate VIII, Lycoperdon giganteum, L. saccatum, and L. gemmatum; plate IX, Agaricus vernus; plate X, Agaricus muscarius, A. phallodes, and A. mappa; plate XI, Boletus felleus, B. alveolatus, and B. luridus; plate XII, Agaricus semi-orbicularis, A. semi-globatus, and A. pediades.

The following was by mistake omitted from the article on NEW FLORIDA FUNGI, by J. B. Ellis and Geo. Martin. It should have appeared on p. 100, in connection with other species of the same genus.

SEPTORIA GRATIOLÆ, E. & M.—On fading leaves of *Gratiola quadridentata*, Florida. Com. Prof. F. L. Scribner. Perithecia punctiform, minute, emergent, scattered over the faded leaves but not in any definite spots. Spores filiform, nucleolate, straight or somewhat curved, continuous, 30—40 x ¾—1 μ.

S. Ludwigiæ, Cke., is on definite spots and has thicker spores.

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